What is Nonalcoholic fatty liver disease (NAFLD)?

NAFLD is a chronic, obesity-associated liver disease that is linked to insulin resistance. It can be mild (just fat in the liver) or more severe with inflammation and fibrosis, called nonalcoholic steatohepatitis (NASH). NAFLD is caused by insulin resistance interfering with normal lipid regulation in the liver and plasma.

Who gets NAFLD?

NAFLD is the most common liver disease in children. It occurs more frequently in children who have Hispanic, Asian or Caucasian heritage—it is less common in Black/African-American children. This disease pattern is likely because of genetic polymorphisms contributing to NAFLD.

NAFLD typically begins around the ages of 8 or 9, near the earliest stages of puberty, but has been seen in children as young as age 5. It is slightly more common in boys than girls.

What are the symptoms?

NAFLD is primarily asymptomatic. Some children complain of pain in their right side, which could be due to the liver stretching as it enlarges from the fat. Clinical findings can include hepatomegaly, and many children also have acanthosis nigricans.

How do I screen for NAFLD?

The AAP Expert Committee guidelines from 2007 recommend screening children ages 12 and older biannually with liver enzymes. However, since then we have learned a lot about pediatric NAFLD, which allows tailoring of the screening protocol. Here are some recommendations based on our experience and the latest evidence:

- Screen using AST/ALT and GGT in obese children (>95th for BMI) starting between the ages of 10 and 12
- New evidence indicates that normal ALT in children is <30
- Consider screening Black/African-American children less often unless there is a family history or blended heritage from a higher-risk group
- Repeat AST/ALT and GGT annually in higher-risk children if they are continuing to gain excess weight or have a family history of NAFLD or Type 2 diabetes

What do I do if the ALT is elevated?

Below is an algorithm we developed for Health4Life, a multidisciplinary obesity clinic at Children’s Healthcare of Atlanta. In NAFLD, the AST should be lower than the ALT, and the GGT should be only mildly elevated. If the AST is higher or the GGT is very high, consider other diseases.

How do I refer a patient?

Call 404-785-1832 for questions or to refer a patient to the Children’s NAFLD Liver Clinic.

Physician Leadership

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